(19) Europäisches Patentamt
European Patent Office
Office européen des brevets

(11) **EP 4 388 965 A1**

(12) **EUROPEAN PATENT APPLICATION**

(43) Date of publication:
26.06.2024 Bulletin 2024/26

(21) Application number: **23216670.2**

(22) Date of filing: **14.12.2023**

(51) International Patent Classification (IPC):
A47L 13/14 *(2006.01)* ***A47L 13/58*** *(2006.01)*

(52) Cooperative Patent Classification (CPC):
A47L 13/14; A47L 13/58

(84) Designated Contracting States:
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC ME MK MT NL NO PL PT RO RS SE SI SK SM TR
Designated Extension States:
BA
Designated Validation States:
KH MA MD TN

(30) Priority: **23.12.2022 IT 202200026664**

(71) Applicant: **Leonardi, Cristian**
Treia (IT)

(72) Inventor: **Leonardi, Cristian**
Treia (IT)

(74) Representative: **Cioncoloni, Giuliana**
Studio Consulenza Brevetti
Cioncoloni S.r.l.
Via Pietro Ferrigni, 28
00159 Roma (IT)

(54) **MULTI-COMPARTMENT MOP WASHING BUCKET**

(57) Multi-compartment mop washing bucket suitable to allow hard surfaces to be cleaned by using a mop which is always clean and soapy, never contaminated by the same washing water of said mop; the bucket therefore comprising at least two receptacles, separated from each other, in order to facilitate the emptying or filling thereof independently from the remaining receptacle; said bucket further comprising a wringer basket, installed above a sub-bottom of said bucket, suitable to facilitate the wringing out of the mop before and after washing, limiting the dripping of the mop while cleaning the hard surfaces.

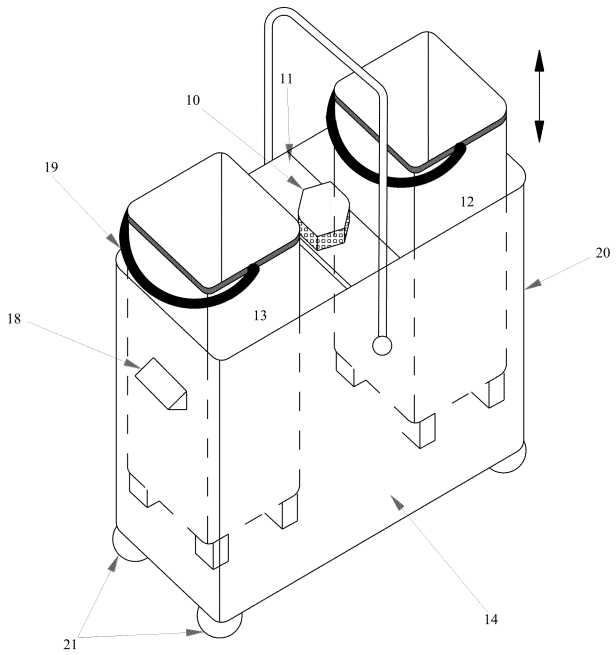

Fig.1

EP 4 388 965 A1

Description

Field of the art

[0001] The invention relates to an innovative mop washing bucket, suitable to comprise a plurality of distinct compartments, which are filled with at least two receptacles, all autonomous and not communicating; said bucket allows an effective rinsing of the mop, without immersing it in dirty water, before cleaning hard surfaces.

Known art

[0002] The mop is a tool used to clean hard surfaces (floors, tiles) and consists of a head connected to a handle, to which strips of fabric are attached.

[0003] Each mop must be moistened with soap and water, in order to thoroughly clean the surfaces.

[0004] In the current state of the art, the mop is immersed in the same water while cleaning hard surfaces, both to soap the fabric strips, and to clean the mop following the cleaning of the surfaces, inevitably dirtying the water contained inside the common mop washing bucket.

[0005] Each bucket, used today, comprises a single compartment, which is suitable to accommodate the soapy water, subsequently dirtied after the first rinsing of the mop.

[0006] Some buckets have tried to remedy the aforesaid problem, dividing the internal volume into several compartments, integral with the bucket.

[0007] However, said compartments, being exclusively constituted by a partition which divides the bucket internally, are suitable to hinder the filling and emptying of said bucket, especially if the user is interested in emptying or filling only one of the two compartments.

[0008] For this reason it is necessary to envisage the creation of a bucket which can allow the mop to be washed in separate and autonomous compartments, without twice contaminating said mop with the dirty water previously wrung out of the relative fabric strips.

[0009] Even patent WO2022213772, published on 13 October 2022, does not solve the above problems as it claims a mop bucket suitable to comprise a plurality of communicating vessels, in which dirty water is intended to flow; patent WO2022213772 thus describes a complex and elaborate bucket, which is intended to significantly increase production costs, resulting in a significant increase in the sale price of a product which has always been intended for the most modest population.

[0010] The object of the patent is therefore to envisage the creation of a mop washing bucket which is simple but precise, suitable to divide the washing water used in cleaning hard surfaces.

Description of the invention

[0011] According to the present invention, a multi-compartment mop washing bucket is created which effectively solves the aforementioned problems.

[0012] The mop washing bucket, object of the invention, comprises a plurality of compartments, in order to house the same number of receptacles which can contain a different type of water therein, allowing the mop to be washed without contaminating it with the dirty water coming from the previous rinsing. In fact, the dirty water coming from the mop after being wrung by means of a special wringer basket, is intended to flow inside a sub-bottom of the bucket, which does not communicate with any receptacle, thus allowing said mop to always be washed with clean, soapy water.

[0013] The two receptacles contained inside said bucket are all independent of each other, and can thus be extracted separately to be emptied or filled during the cleaning operations of hard surfaces.

[0014] In an embodiment thereof, said two receptacles are suitable to be more tightly bound to the bucket by means of the use of a Velcro, installed inferiorly and laterally to the external outer surface of the receptacles and to the internal surface of the bucket; said Velcro is suitable to give greater stability to the receptacles comprised inside the bucket, obtaining a greater overall rigidity of the article. Alternatively, said two receptacles are suitable to employ a plurality of magnets to be more tightly bound to the bucket; said magnets are thus installed inside said receptacles and inside of said bucket, in order to confer a greater overall rigidity to the article; said magnets are further useful to speed up and facilitate the insertion of said receptacles inside the bucket by exploiting the magnetic attraction.

[0015] The bucket is therefore made of rigid plastic material, suitable to house at least two receptacles therein, separated from each other, each containing a different liquid, allowing the mop to be washed without contaminating it with dirty water; said bucket therefore constitutes an external rigid structure which has the purpose of compacting and binding said two receptacles while cleaning hard surfaces. Said bucket comprises an upper transversal rim suitable for joining the upper edges, facilitating the binding of a wringer basket.

[0016] A first receptacle is made of rigid plastic material and is suitable to contain soapy water therein, in order to allow the cleaning of hard surfaces by means of said mop; said first receptacle is suitable to be engaged inside said bucket and is characterized by a width of 50 centimetres, a depth of 27 centimetres and a height ranging from 32 to 35 centimetres. The first receptacle comprises a handle, constrained on the upper edges and suitable for rotating, facilitating the extraction of the receptacle and thus the emptying thereof. Said first receptacle comprising at least four support feet, installed inferiorly, suitable for maintaining a stable distance from the floor, when said first receptacle is extracted from the bucket.

[0017] The dirty water used for rinsing said mop, following the cleaning of hard surfaces, is contained in a second receptacle, also made of rigid plastic material; said second receptacle is suitable to be engaged inside

the bucket, having a width of 50 centimetres, a depth of 27 centimetres and a height ranging from 32 to 35 centimetres. Said second receptacle also has a handle, constrained on the upper edges and suitable for rotating, facilitating the extraction and thus the emptying of said second receptacle. Said second receptacle comprising at least four support feet, installed inferiorly, suitable for maintaining a stable distance from the floor, when said second receptacle is extracted from the bucket.

[0018] A sub-bottom of the bucket is instead obtained centrally in the bucket but below said said first and said second receptacle; said sub-bottom is suitable for holding the water absorbed by the mop when it is wrung out in said wringer basket.

[0019] The wringer basket is installed above said bucket, at the bottom of the sub-bottom of the bucket, engaging inside the upper transverse edge, in order to convey the water obtained from wringing out the mop, inside said sub-bottom. By way of non-limiting example, said wringer basket is suitable for being screwed inside the upper transversal rim of the bucket, by means of the use of a thread engraved on said transversal rim; said wringer basket, once screwed, provides an increased rigidity of the overall article.

[0020] Two handles are installed on the side of said bucket, suitable for facilitating its transport and for making it easier to handle; said handles are further suitable for facilitating the removal of the receptacles from the bucket by preventing the lifting of the latter.

[0021] Said bucket further comprises a main handle, suitable to allow it to be lifted while cleaning said hard surfaces.

[0022] A plurality of wheels can be installed externally to said bucket, in order to facilitate its handling while cleaning hard surfaces. In addition, again by way of non-limiting example, at least four rubber elements are installed inferiorly to said bucket, one for each edge, suitable for rotating, limiting their protrusion externally to said bucket. These elements, when in contact with the floor, reduce the slipping of the bucket on the treated hard surface.

[0023] The advantages offered by the present invention are apparent in the light of the description set forth herein and will be further clarified by the accompanying figure and the detailed description.

Description of the figures

[0024] The invention will be described below in at least one preferred embodiment by way of non-limiting example and with the aid of the accompanying figure, in which: -FIGURE 1 shows a perspective view of the bucket 20 designed to comprise therein, thanks to a plurality of compartments, at least two receptacles 12, 13.

[0025] A first receptacle 12 is suitable to contain the soapy water, useful to treat the mop before cleaning hard surfaces.

[0026] A second receptacle 13 is suitable to contain the washing water, suitable to rinse said mop, following the cleaning of hard surfaces.

[0027] The mop, if immersed in the first 12 or in the second receptacle 13, is subsequently wrung out in a suitable basket 10, in order to drain the excess water inside a sub-bottom 14 of the bucket.

[0028] The bucket 20 is further equipped with a plurality of wheels 21 and with a plurality of rubber elements 16, suitable to reduce the slipping of the bucket 20 on soapy hard surfaces.

[0029] At least two handles 18 are installed laterally to said bucket 20, in order to obtain an easy removal of the receptacles 12, 13, stopping the position of the bucket 20.

Detailed description of the invention

[0030] The present invention will now be illustrated by way of non-limiting or binding example, using the figure which illustrates some embodiments in relation to the present inventive concept.

[0031] With reference to FIG. 1, an exemplary diagram of the multi-compartment mop washing bucket 20, described in the present patent application, is illustrated.

[0032] Said bucket 20 is suitable to comprise a plurality of receptacles 12, 13 therein, allowing a free and independent management of each receptacle 12, 13 containing a certain washing water for the mop.

[0033] Both the first 12 and the second receptacle 13 can be removed from the bucket by using a handle 19, installed on both receptacles 12, 13. The removal of one receptacle does not in any way affect the operation of the other receptacles 12, 13.

[0034] In fact, the first receptacle 12 is suitable to contain the soapy water, useful to soap the mop before beginning to clean hard surfaces.

[0035] A second receptacle 13, contains the washing water therein, intended to rinse the mop between one cleaning session and the other.

[0036] The mop, between one immersion and the other, inside the first 12 or the second receptacle 13, is suitable to be wrung out inside a special basket 10, installed above a transversal rim 11 of said bucket 20.

[0037] The water coming from wringing out the mop, through the basket 10, is made to flow inside a sub-bottom 14 of the bucket.

[0038] Each receptacle 12, 13 lends itself to being totally independent and removable from said bucket 20.

[0039] The movement of the bucket 20 is ensured by the presence of a plurality of wheels 21, and by the presence of at least two handles 18, suitable for facilitating the grip of the bucket for its movement inside the treated rooms.

[0040] Said handles 18 are further suitable for facilitating the removal of said receptacles 12, 13, keeping the structure of the bucket 20 stationary during the lifting of said first 12 and said second receptacle 13.

[0041] In the present figure, a plurality of rubber elements 16 are highlighted, suitable to fix the position of

the bucket 20 when said elements are in contact with the floor.

[0042] Lastly, it is clear that the invention described up to now can be subjected to modifications, additions or variants obvious to those skilled in the art, without departing from the scope of protection outlined by the attached claims.

Claims

1. Multi-compartment mop washing bucket (20) **characterised in that** it allows hard surfaces to be cleaned by using a mop which is always clean and soapy, never contaminated by the same washing water; said bucket (20) further comprising at least two receptacles (12, 13), separated from each 5 other, in order to facilitate emptying or filling independently from said remaining receptacle (12, 13); said bucket (20) further comprising a wringer basket (10), installed above the sub-bottom (14) of the bucket (20), suitable for facilitating the wringing out of the mop before and after washing, limiting the dripping of the 10 mop during the cleaning of hard surfaces; said compartmentalised mop washing bucket (20) comprising:

   - at least one bucket (20), made of rigid plastic material, suitable for holding inside it at least two separate receptacles (12, 13), each containing a different liquid, in order to enable the mop to be washed without 15 contaminating it with dirty water said bucket (20) thus constituting an external rigid structure for the purpose of compacting and binding said two receptacles (12, 13) during the cleaning of hard surfaces; said bucket (20) further comprising an upper transversal rim (11) suitable for joining the upper edges of said bucket (20), further facilitating the binding of said 20 wringer basket (10);
   - a first receptacle (12), made of rigid plastic material, suitable to contain inside it soapy water, in order to allow the cleaning of hard surfaces by means of said mop; said first receptacle (12) being suitable to be placed inside said bucket (20) and being **characterised by** a width of 50 cm, a depth 25 of 27 cm and a height ranging from 32 to 35 cm; said first receptacle (12) comprising a handle (19), constrained on its upper edges and suitable for rotating, facilitating its extraction and, therefore, its emptying; said first receptacle (12) comprising at least four support feet, installed at the bottom, suitable for maintaining a stable distance from the floor, when said first receptacle (12) is extracted from said bucket (20);
   - a second receptacle (13), made of rigid plastic material, suitable to contain within said second receptacle (13) the dirty water used to rinse said mop following the cleaning of hard surfaces; said second receptacle 5 (13) being suitable to be placed inside said bucket (20) and being **characterised by** a width of 50 centimetres, a depth of 27 centimetres and a height ranging from 32 to 35 centimetres said second receptacle (13) comprising a handle (19), constrained on its upper edges and suitable to rotate, facilitating its 10 extraction and therefore its emptying; said second receptacle (13) comprising at least four support feet, installed at the bottom, suitable to maintain a stable distance from the floor, when said second receptacle (13) is extracted from the bucket (20);
   - at least a sub-bottom (14) of the bucket suitable for holding the water 15 absorbed by the mop when it is wrung out in said wringer basket (10); said sub-bottom (14) being suitable for being emptied by tilting said bucket (20);
   - at least one wringer basket (10), installed on top of said bucket (20), at said sub-bottom (14) of said bucket (20); said wringer basket (10) being engaged within said upper transverse edge (11) in order to convey the water obtained 20 from wringing out the mop into said sub-bottom (14) of said bucket (20);
   - at least one main handle, fitted to said bucket (20), suitable for easy lifting;
   - at least two handles (18), installed on the side of said bucket (20), suitable for facilitating its transport and for making it easier to handle; said handles (18) being further suitable for facilitating the removal of the receptacles (12, 25 13) from the bucket (20) by preventing the lifting of said receptacles (12, 13).

2. Multi-compartment mop washing bucket (20), according to preceding claim 1, **characterised in that** said two receptacles (12, 13), distinct and separate from each other, are suitable to be more tightly bound to the bucket (20) by means of a Velcro, installed inferiorly and laterally to the external surface of the receptacles (12, 13) and to the internal surface of the bucket (20); said Velcro being suitable to give greater stability to the receptacles (12, 13) inside the bucket (20), resulting in greater overall rigidity 5 of the article.

3. Multi-compartment mop washing bucket (20), according to preceding claim 1, **characterised in that** said two receptacles (12, 13), distinct and separate from each other, are suitable to be more tightly bound to the bucket (20) by means of the use of a plurality of magnets, installed inside said receptacles (12, 13) 10 and inside said bucket (20), in order to obtain a greater overall rigidity of the manufactured article; said magnets being further suitable for exploiting the

magnetic attraction to facilitate and facilitate the insertion of said receptacles (12, 13) inside said bucket.

4. Multi-compartment mop washing bucket (20), according to any one of the 15 preceding claims, **characterised in that** said wringer basket (10) is suitable for being screwed inside the upper transversal rim (11) of the bucket (20), by means of the use of a thread engraved on said transversal rim (11); said wringer basket (10), once screwed, providing an increased rigidity of the overall article.

5. Multi-compartment mop washing bucket (20), according to any one of the 20 preceding claims, **characterised in that** a plurality of wheels (21) are installed externally to said bucket (20), in order to facilitate its handling during the cleaning of hard surfaces.

6. Multi-compartment mop washing bucket (20), according to any one of the preceding claims, **characterised in that** at least four rubber elements are installed inferiorly to said bucket (20), each for each edge; said elements, being suitable to fix the position of the bucket (20), even on slippery floors, when rotated and placed in contact with the floor.

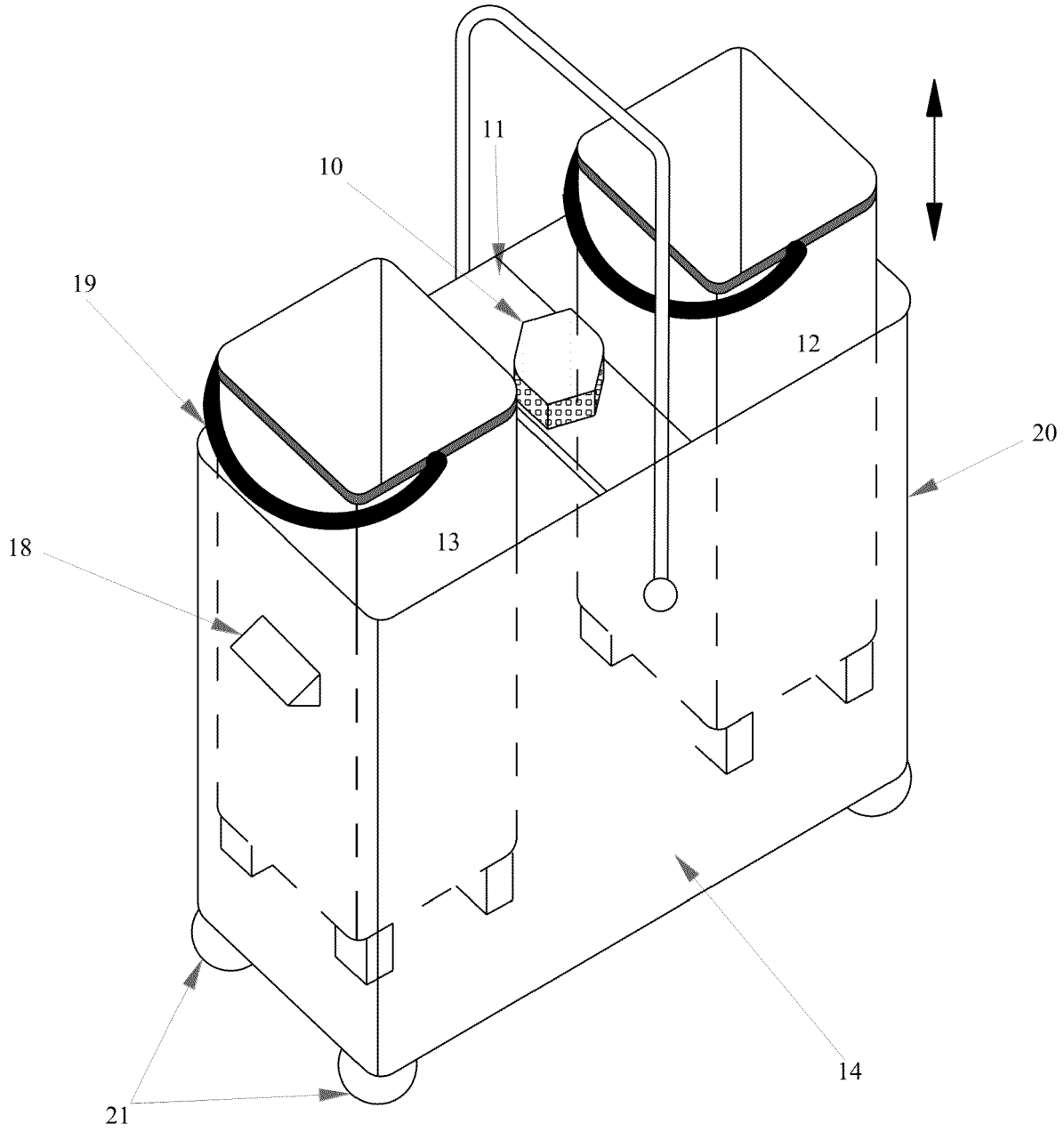

Fig.1

Europäisches Patentamt
European Patent Office
Office européen des brevets

EUROPEAN SEARCH REPORT

Application Number
EP 23 21 6670

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
A	WO 02/00089 A1 (TOXVAERD LARSEN HANS LAURITZ [DK]) 3 January 2002 (2002-01-03) * figures 1,2 *	1-6	INV. A47L13/14 A47L13/58
A	EP 2 286 706 A1 (RIVADULLA OLIVA CARLOS [ES]) 23 February 2011 (2011-02-23) * the whole document *	1-6	
A	US 2016/316988 A1 (BALZ ERIC R [US] ET AL) 3 November 2016 (2016-11-03) * the whole document *	1-6	
			TECHNICAL FIELDS SEARCHED (IPC)
			A47L

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
Munich	29 April 2024	Trimarchi, Roberto

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
Y : particularly relevant if combined with another document of the same category
A : technological background
O : non-written disclosure
P : intermediate document

T : theory or principle underlying the invention
E : earlier patent document, but published on, or after the filing date
D : document cited in the application
L : document cited for other reasons
.....
& : member of the same patent family, corresponding document

EPO FORM 1503 03.82 (P04C01)

ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO. EP 23 21 6670

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

29-04-2024

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 0200089 A1	03-01-2002	AT E335431 T1	15-09-2006
		AU 6583801 A	08-01-2002
		DE 60122158 T2	28-06-2007
		EP 1301115 A1	16-04-2003
		ES 2272483 T3	01-05-2007
		WO 0200089 A1	03-01-2002
EP 2286706 A1	23-02-2011	CN 102014723 A	13-04-2011
		EP 2286706 A1	23-02-2011
		ES 1067846 U	01-07-2008
		ES 2538277 T3	18-06-2015
		JP 5010048 B2	29-08-2012
		JP 2011518631 A	30-06-2011
		TR 201008974 T1	23-05-2011
		US 2011061193 A1	17-03-2011
		WO 2009133215 A1	05-11-2009
US 2016316988 A1	03-11-2016	AU 2016258828 A1	16-11-2017
		AU 2018286586 A1	24-01-2019
		CA 2984500 A1	10-11-2016
		CA 3081843 A1	10-11-2016
		CN 107529933 A	02-01-2018
		EP 3288435 A1	07-03-2018
		JP 6932688 B2	08-09-2021
		JP 7048676 B2	05-04-2022
		JP 2018518332 A	12-07-2018
		JP 2020168485 A	15-10-2020
		US 2016316988 A1	03-11-2016
		US 2021386266 A1	16-12-2021
		WO 2016178969 A1	10-11-2016

EPO FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

REFERENCES CITED IN THE DESCRIPTION

This list of references cited by the applicant is for the reader's convenience only. It does not form part of the European patent document. Even though great care has been taken in compiling the references, errors or omissions cannot be excluded and the EPO disclaims all liability in this regard.

Patent documents cited in the description

- WO 2022213772 A **[0009]**